

Amendments to the Claims

The following listing of claims replaces any previous versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) A method for manufacturing a semiconductor device with capacitor elements, comprising:

forming a conductive layer on a first insulating layer formed on a substrate, and on a plurality of contact plugs formed in the first insulating layer;

forming a plurality of capacitor element lower electrodes by patterning the conductive layer;

forming a second insulating layer on the first insulating layer and the capacitor element lower electrodes;

forming a recess in the second insulating layer at a region above the capacitor element lower electrodes, without exposing a surface of the capacitor element lower electrodes;

planarizing the second insulating layer with the recess by polishing so as to not expose the surface of the capacitor element lower electrodes;

exposing the capacitor element lower electrodes by removing a surface portion of the planarized second insulating layer; and

forming a capacitive insulating film and capacitor element upper electrodes above the capacitor element lower electrodes.

2. (original) The method for manufacturing a semiconductor device according to claim 1, wherein the step of exposing the capacitor element lower electrodes is carried out by etchback.

3. (original) The method for manufacturing a semiconductor device according to claim 2, wherein the step of planarizing the second insulating layer by polishing is carried out by CMP (chemical mechanical polishing).

Claims 4-5 (canceled)

6. (withdrawn) The method for manufacturing a semiconductor device according to claim 1, wherein in the step of forming capacitor element lower electrodes, metal conductors are formed together with the capacitor element lower electrodes by patterning the conductive layer.

7. (withdrawn) The method for manufacturing a semiconductor device according to claim 6, wherein recesses in the second insulating layer are formed only in a region in which the capacitor element lower electrodes are arranged.

8. (currently amended) The method for manufacturing a semiconductor device according to claim 1, wherein the a surface of the conductive layer is made of Pt, Ir, Ru, an alloy thereof or a metal oxide thereof.

9. (original) The method for manufacturing a semiconductor device according to claim 1, wherein the step of forming a recess in the second insulating layer is performed by dry etching.

10. (withdrawn) The method for manufacturing a semiconductor device according to claim 9, wherein a depth of the recess formed in the second insulating layer is substantially the same as a film thickness of the capacitor element lower electrodes.

Claim 11 (canceled)

12. (withdrawn) The method for manufacturing a semiconductor device according to claim 9, wherein the dry etching is performed such that a taper angle of less than 90° is formed at a bottom corner of the recess formed in the second insulating layer.

13. (original) The method for manufacturing a semiconductor device according to claim 1, wherein the second insulating film is an SiO₂ film formed by atmospheric CVD using ozone and tetrachlorosilicate.

14. (withdrawn) The method for manufacturing a semiconductor device according to claim 1, wherein a region of the recess of the second insulating layer is made larger than the capacitor element lower electrodes below that region.

15. (withdrawn) The method for manufacturing a semiconductor device according to claim 1, wherein the recess of the second insulating layer is formed at a size spanning a region above a plurality of the capacitor element lower electrodes.

Claims 16-17 (canceled)